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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RICHARD J. McCANN

Appeal 2008-0785
Application 10/772,136
Technology Center 3700

Decided: May 29, 2008

Before MICHAEL R. FLEMING, *Chief Administrative Patent Judge*, and
WILLIAM F. PATE III, SALLY C. MEDLEY, LINDA E. HORNER, and
JOSEPH A. FISCHETTI, *Administrative Patent Judges*.

HORNER, *Administrative Patent Judge*.

DECISION ON APPEAL
STATEMENT OF THE CASE

Richard J. McCann (Appellant) seeks our review under 35 U.S.C. § 134 of the final rejection of claims 1 and 2. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

SUMMARY OF DECISION

We AFFIRM.

THE INVENTION

The Appellant's claimed invention is to a folding knife with a pivoting or retracting blade that is locked into an open position by a latch member biased by a gas spring (Spec. 1:7-9). Claim 1, reproduced below, is representative of the subject matter on appeal.

1. A knife, comprising:
 - a handle;
 - a blade movably secured to the handle so that the blade is movable along a path of travel between a closed position and an open position;
 - a latch member movable between a locked position in which it extends into the path of travel of a portion of the blade thereby preventing movement of the blade and an unlocked position in which it does not interfere with movement of the blade;
 - a gas spring positioned to bias the latch member into the locked position, the gas spring comprising a movable wall that partially defines a substantially sealed, variable volume chamber containing a gas; and
 - wherein movement of the latch member from the locked position to the unlocked position causes the movable wall to reduce the volume of the chamber, thereby compressing the gas to create spring force against the latch member.

THE REJECTION

The Examiner relies upon the following as evidence of unpatentability:

Collins	US 4,451,982	Jun. 5, 1984
Poehlmann	US 5,964,035	Oct. 12, 1999

The Appellant seeks our review of the rejection of claims 1 and 2 under 35 U.S.C. § 103(a) as unpatentable over Collins and Poehlmann.

ISSUE

The Appellant contends that the Examiner erred in rejecting claims 1 and 2 under 35 U.S.C. § 103(a) as unpatentable over Collins and Poehlmann, because the Examiner failed to give the submitted evidence of long felt, unfulfilled need proper consideration as objective evidence of nonobviousness (App. Br. 4). The Appellant further contends that “[n]either Collins nor Poehlmann teach [*sic*] ‘a movable wall that partially defines a substantially sealed, variable volume chamber containing a gas’ nor that movement of the bolt or latch member ‘causes the movable wall to reduce the volume of the chamber, thereby compressing the gas to create spring force against the latch member’” (App. Br. 7). The Appellant further contends that “Poehlmann’s vague and bare reference to a ‘pneumatically-forced system’ does not provide sufficient direction to modify Collins to include ‘a movable wall that partially defines a substantially sealed, variable volume chamber containing a gas’ and that movement of the latch member ‘causes the movable wall to

reduce the volume of the chamber, thereby compressing the gas to create spring force against the latch member' as presently claimed" (App. Br. 8).

The Examiner found Collins teaches all of the elements of the claimed invention except the use of a gas spring, and that Poehlmann teaches replacing a metal spring with a pneumatic or hydraulic biasing means for the purpose of biasing a locking mechanism on a folding knife (Ans. 3). The Examiner concluded that it would have been obvious to modify the knife of Collins with a locking mechanism biased by a gas spring, as taught in Poehlmann, because such a modification would require only routine skill in the art, and using a pneumatic or hydraulic biasing means with a piston would be more resilient to wear and less likely to break or deform when pushed or pulled to extremes (Ans. 3). The Examiner further found that it would be inherent in the design of a pneumatic spring that the variable volume chamber would be sealed as otherwise no gas would be compressed to make a spring as all the gas in the chamber would be forced out when the piston was depressed (Ans. 4). The Examiner considered the Appellant's objective evidence of nonobviousness, but found that this evidence was not persuasive (Ans. 5-6).

The issue before us is whether the Appellant has shown that the Examiner erred in rejecting claims 1 and 2 under 35 U.S.C. § 103(a) as unpatentable over Collins and Poehlmann. This issue turns on our evaluation and weighing of both the evidence relied upon by the Examiner and the objective evidence of nonobviousness provided by the Appellant.

FINDINGS OF FACT

We find that the following enumerated findings are supported by at least a preponderance of the evidence. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Office).

1. Collins discloses a knife having a handle 10 and a blade 12 pivotally connected to the handle so that the blade can be opened into an open position (Fig. 1) and folded into a slot 18 of the handle in a closed position (Fig. 6) (Collins, col. 2, ll. 28-34).
2. The knife includes an internal bolt mechanism 24 (latch member) for selectively locking the blade in the open position (Collins, col. 2, ll. 35-38).
3. The bolt 24 is urged toward a first end 17 of the handle by "a spring or other biasing mechanism 62" (Collins, col. 3, ll. 31-33; Fig. 5).
4. Collins does not disclose a gas spring positioned to bias the bolt 24 into the locked position, where the gas spring comprises a movable wall that partially defines a substantially sealed, variable volume chamber containing a gas, and wherein movement of the bolt from the locked position to the unlocked position causes the movable wall to reduce the volume of the chamber, thereby compressing the gas to create spring force against the bolt mechanism 24.
5. Poehlmann, likewise, discloses a knife having a handle and a blade 2 mounted to the handle so as to permit rotation about an

axis from a folded or closed configuration (Fig. 3) to an extended or open configuration (Fig. 4) (Poehlmann, col. 3, ll. 10-15).

6. Poehlmann's knife also includes a key locking mechanism (latch member) designed to lock the blade in place relative to the handle when the blade is in the open configuration (Poehlmann, col. 4, ll. 20-41).
7. The key locking mechanism uses a helical spring 208 to bias a key device 6 outwardly such that the locking keys 234 and 236 are positioned partially in the keyways 238 and 240 of the right handle plate 1 and partially in the keyways 214 and 216 of the blade 2 to prevent any rotation of the blade with respect to the handle (Poehlmann, col. 4, ll. 13-41; Fig. 2).
8. To rotate the blade 2, a user compresses the key locking mechanism to move the key 6 against the bias of spring 208 to a position such that the keys 234 and 236 reside solely within the blade keyways 214 and 216 and are clear of the right plate keyways 238 and 240 (Poehlmann, col. 4, l. 59 – col. 5, l. 14; Fig. 6A).
9. Poehlmann teaches that “[a] biasing or urging means other than helical spring 208 can be provided such as a compression spring, a leaf spring, a resiliently deformable plastic or other material and/or hydraulic or pneumatic forced systems” (Poehlmann, col. 8, ll. 31-35).
10. A pneumatic forced system describes a gas spring.

11. Although Poehlmann discloses using a gas spring to bias the key locking member into the locked position, it does not expound on the particular construction or operation of the gas spring, *viz*, having a movable wall that partially defines a substantially sealed, variable volume chamber containing a gas, and wherein movement of the key locking member from the locked position to the unlocked position causes the movable wall to reduce the volume of the chamber, thereby compressing the gas to create spring force against the key locking member.
12. A person of ordinary skill in the art would have known that metal biasing springs used in locking mechanisms fail as a result of fatigue and/or breakage (McCann Decl. 1:¶¶5, 13; Declaration of Charles W. Karwan 1:¶5).
13. A person having ordinary skill in the art would have been familiar with the conventional construction of gas springs in the form of a sealed piston unit filled with gas wherein the compressibility of the gas supplies the force for the piston assembly to function as a spring (Karwan Decl. 2:¶6).
14. A person having ordinary skill in the art would have been familiar with common gas springs at the time of the invention, including the conventional construction of gas springs comprising a movable wall that partially defines a substantially-sealed, variable volume chamber containing a gas, wherein the movable wall reduces the volume of the chamber, thereby compressing the gas to create a

biasing spring force. See e.g., U.S. Patent No. 4,240,619 to Wirges, issued December 23, 1980, which was made of record by the Examiner in the Final Office Action (Final Office Action 4).

15. Wirges discusses conventional gas springs used in the trunk lids of automobiles in the background section of the patent, in which a gas spring is arranged between the body and a pivotally-mounted trunk lid, and gas pressure in the spring causes the lid to swing upward from its lowermost position when the trunk lock is opened (Wirges, col. 1, ll. 24-28).
16. Wirges describes that “[i]n the most common gas springs in current practical use, the gas pressure is sufficient fully to open the lid and to hold it in the open position although the biasing force of the expanding gas in the spring decreases as the lid rises” (Wirges, col. 1, ll. 28-32).
17. One having ordinary skill in the art would understand that to implement such a common gas spring wherein the gas pressure in the spring is sufficient to open the trunk lid when the trunk is unlocked due to expanding gas pressure, that one would need a sealed, variable volume container with a piston disposed therein, such that the compressed gas in the container provides the biasing force to open and maintain the lid in the open position due to the expansion of the gas in the container.

PRINCIPLES OF LAW

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 127 S.Ct. at 1734 (“While the sequence of these questions might be reordered in any particular case, the [Graham] factors continue to define the inquiry that controls.”)

In *KSR*, the Supreme Court emphasized “the need for caution in granting a patent based on the combination of elements found in the prior art,” *id.* at 1739, and discussed circumstances in which a patent might be determined to be obvious. In particular, the Supreme Court emphasized that “the principles laid down in *Graham* reaffirmed the ‘functional approach’ of *Hotchkiss*, 11 How. 248.” *KSR*, 127 S.Ct. at 1739 (citing *Graham*, 383 U.S. at 12 (emphasis added)), and reaffirmed principles based on its precedent that “[t]he combination of familiar elements according to known methods is

likely to be obvious when it does no more than yield predictable results.” *Id.*

The Court explained:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at 1740. The operative question in this “functional approach” is thus “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.*

The Supreme Court stated that there are “[t]hree cases decided after *Graham* [that] illustrate the application of this doctrine.” *Id.* at 1739. “In *United States v. Adams*, ... [t]he Court recognized that when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *Id.* at 1739-40. “*Sakraida and Anderson's-Black Rock* are illustrative – a court must ask whether the improvement is more than the predictable use of prior art elements according to their established function.” *Id.* at 1740.

The Supreme Court stated that “[f]ollowing these principles may be more difficult in other cases than it is here because the claimed subject

matter may involve more than the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement.” *Id.* The Court explained:

Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.

Id. at 1740-41. The Court noted that “[t]o facilitate review, this analysis should be made explicit.” *Id.* (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”)). However, “the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *Id.*

The Federal Circuit recently concluded that it would have been obvious to combine (1) a mechanical device for actuating a phonograph to play back sounds associated with a letter in a word on a puzzle piece with (2) an electronic, processor-driven device capable of playing the sound associated with a first letter of a word in a book. *Leapfrog Ent., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161 (Fed. Cir. 2007) (“[a]ccommodating

a prior art mechanical device that accomplishes [a desired] goal to modern electronics would have been reasonably obvious to one of ordinary skill in designing children's learning devices"). In reaching that conclusion, the Federal Circuit recognized that “[a]n obviousness determination is not the result of a rigid formula disassociated from the consideration of the facts of a case. Indeed, the common sense of those skilled in the art demonstrates why some combinations would have been obvious where others would not.” *Id.* at 1161 (citing *KSR*, 127 S.Ct. 1727, 1739 (“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.”)). The Federal Circuit relied in part on the fact that Leapfrog had presented no evidence that the inclusion of a reader in the combined device was “uniquely challenging or difficult for one of ordinary skill in the art” or “represented an unobvious step over the prior art.” *Id.* (citing *KSR*, 127 S.Ct. at 1740-41).

Scope and Content

In determining the scope and content of the prior art, we consider not only whether the elements are found expressly in the prior art reference, but also whether the elements are found inherently therein. “To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities.

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The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (citations omitted) (internal quotation marks omitted).

Level of Ordinary Skill in the Art

In determining the level of ordinary skill in the art, we consider various factors to shed light on what a hypothetical person of ordinary skill would have known at the time of the invention.

The person of ordinary skill in the art is a hypothetical person who is presumed to know the relevant prior art. *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962, 1 USPQ2d 1196, 1201 (Fed. Cir. 1986). In determining this skill level, the [Board] may consider various factors including “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *Id.* In a given case, every factor may not be present, and one or more factors may predominate. *Id.* at 962-63, 1 USPQ2d at 1201.

In re GPAC, 57 F.3d 1573, 1579 (Fed. Cir. 1995). “A person of ordinary skill is also a person of ordinary creativity, not an automaton.” *KSR*, 127 S.Ct. at 1742.

Secondary Considerations

In our determination of obviousness under 35 U.S.C. § 103, we also carefully weigh, in addition to the evidence relied upon by the Examiner, the

objective evidence of nonobviousness provided by Appellant.

To be given substantial weight in the determination of obviousness or nonobviousness, evidence of secondary considerations must be relevant to the subject matter as claimed, and therefore the examiner must determine whether there is a nexus between the merits of the claimed invention and the evidence of secondary considerations. *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 305 n.42 (Fed. Cir. 1985), *cert. denied*, 475 U.S. 1017 (1986). In particular, an applicant asserting secondary considerations to support its contention of nonobviousness bears the burden of proof of establishing a nexus between the claimed invention and evidence of secondary considerations. For example, in the case of evidence of commercial success, the Federal Circuit has acknowledged that the applicant bears the burden of establishing a nexus, stating:

In the ex parte process of examining a patent application, however, the PTO lacks the means or resources to gather evidence which supports or refutes the applicant's assertion that the sale constitutes commercial success. *C.f. Ex parte Remark*, 15 USPQ2d 1498, 1503 (Bd. Pat. App. & Int. 1990)(evidentiary routine of shifting burdens in civil proceedings inappropriate in ex parte prosecution proceedings because examiner has no available means for adducing evidence). Consequently, the PTO must rely upon the applicant to provide hard evidence of commercial success.

In re Huang, 100 F.3d 135, 139-40 (Fed. Cir. 1996). *See also In re GPAC*, 57 F.3d 1573, 1580 (Fed. Cir. 1995); *In re Paulsen*, 30 F.3d 1475, 1482

(Fed. Cir. 1994) (Evidence of commercial success of articles not covered by the claims subject to the obviousness rejection was not probative of nonobviousness).

Objective evidence of nonobviousness, including commercial success, must be commensurate in scope with the claims. *In re Tiffin*, 448 F.2d 791 (CCPA 1971) (evidence showing commercial success of thermoplastic foam “cups” used in vending machines was not commensurate in scope with claims directed to thermoplastic foam “containers” broadly). In order to be commensurate in scope with the claims, the commercial success must be due to claimed features, and not due to unclaimed features. *Joy Technologies Inc. v. Manbeck*, 751 F. Supp. 225, 229 (D.D.C. 1990), *aff’d*, 959 F.2d 226, 228 (Fed. Cir. 1992) (Features responsible for commercial success were recited only in allowed dependent claims, and therefore the evidence of commercial success was not commensurate in scope with the broad claims at issue.). An inventor’s opinion as to the purchaser’s reason for buying the product is insufficient to demonstrate a nexus between the sales and the claimed invention. *In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996). Further, gross sales figures do not show commercial success absent evidence as to market share, *Cable Electric Products, Inc. v. Genmark, Inc.*, 770 F.2d 1015 (Fed. Cir. 1985), or as to the time period during which the product was sold, or as to what sales would normally be expected in the market, *Ex parte Standish*, 10 USPQ2d 1454 (BPAI 1988).

Establishing long-felt need requires objective evidence that an art-recognized problem existed in the art for a long period of time without

solution. In particular, the evidence must show that the need was a persistent one that was recognized by those of ordinary skill in the art. *In re Gershon*, 372 F.2d 535, 539 (CCPA 1967). The relevance of long-felt need and the failure of others to the issue of obviousness depend on several factors. First, the need must have been a persistent one that was recognized by those of ordinary skill in the art. *Orthopedic Equipment Co. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376 (Fed. Cir. 1983); *see also In re Gershon*, 372 F.2d 535, 539 (CCPA 1967). Second, the long-felt need must not have been satisfied by another before the invention by applicant. *Newell Companies v. Kenney Mfg. Co.*, 864 F.2d 757, 768 (Fed. Cir. 1988) (“[O]nce another supplied the key element, there was no long-felt need or, indeed, a problem to be solved.”) Third, the invention must in fact satisfy the long-felt need. *In re Cavanagh*, 436 F.2d 491 (CCPA 1971). “[L]ong-felt need is analyzed as of the date of an articulated identified problem and evidence of efforts to solve that problem.” *Texas Instruments, Inc. v. ITC*, 988 F.2d 1165, 1178 (Fed. Cir. 1993).

ANALYSIS

The Appellant states claims 1 and 2 stand and fall together (App. Br. 3). As such, we select claim 1 as the representative claim.

Scope and Content of the Prior Art

Collins discloses a knife having all of the elements of claim 1 except that it shows using a metal spring rather than a gas spring to bias the latch

member (Facts 1-3). Collins teaches, however, that the latch member can be biased by “a spring or other biasing mechanism” (Fact 3). Poehlmann, likewise, discloses a folding knife having a blade that can be locked in place relative to the handle and that uses a helical spring to bias the locking mechanism (Facts 5-8). Poehlmann further teaches that “[a] biasing or urging means other than helical spring 208 can be provided such as a compression spring, a leaf spring, a resiliently deformable plastic or other material and/or hydraulic or pneumatic forced systems” (Fact 9). A pneumatic forced system describes a gas spring (Fact 10).

Differences between the Prior Art and the Claimed Invention

Although Collins suggests using biasing means other than a metal spring (Fact 3), it does not specifically disclose using a gas spring as a biasing force on its latch member (Fact 4). Poehlmann discloses using a gas spring to bias its key locking member into the locked position (Facts 9, 10). Poehlmann does not, however, expound on the particular construction or operation of the gas spring, *viz*, having a movable wall that partially defines a substantially sealed, variable volume chamber containing a gas, and wherein movement of the key locking member from the locked position to the unlocked position causes the movable wall to reduce the volume of the chamber, thereby compressing the gas to create spring force against the key locking member (Fact 11). We find, however, that a person having ordinary skill in the art would have been familiar with common gas springs at the time of the invention, including the conventional construction of gas springs

comprising a movable wall that partially defines a substantially-sealed, variable volume chamber containing a gas, wherein the movable wall reduces the volume of the chamber, thereby compressing the gas to create a biasing spring force (Facts 14-17). *See KSR*, 127 S.Ct. at 1742 (“A person of ordinary skill is also a person of ordinary creativity, not an automaton”).

The Appellant appears to argue that the disclosure in Poehlmann to use a pneumatic forced system is not enabling and thus not properly considered in a determination of obviousness (Reply Br. 5). A reference needs not provide an enabling disclosure for conventional devices that are well known in the art. In this case, the conventional construction of a gas spring is well known.

Level of Ordinary Skill in the Art

The Appellant asserts that a person of ordinary skill in the art of knife design is likely to be a general machinist with little or no specialized training in knife design, but with several years of hands-on experience (Declaration of Richard J. McCann 1:¶4). The Examiner has not disputed the Appellant’s position, nor has the Examiner proffered a different level of skill in the art.

We find that a person of ordinary skill in the art would have known that metal biasing springs used in locking mechanisms fail as a result of fatigue and/or breakage (Fact 12).¹ We further find that a person having

¹ We do not rely on the declarations of Messrs. Covert and Cutshaw for this finding, as they are not persons of ordinary skill in the art of knife design as defined by Appellant. Mr. Covert has training and experience as an author and journalist (Covert Decl. 1:¶¶ 4, 5), and Mr. Cutshaw has training and

ordinary skill in the art would have been familiar with the conventional construction of gas springs in the form of a sealed piston unit filled with gas wherein the compressibility of the gas supplies the force for the piston assembly to function as a spring (Fact 13).

Prima Facie Case

As we found *supra*, the knife disclosed in Collins is the same as the claimed knife except that it employs a metal spring for the biasing mechanism. Poehlmann teaches using a gas spring in place of a metal spring as a biasing force in a foldable knife. As such, the Examiner's suggested modification to the knife of Collins to use the gas spring of Poehlmann is nothing more than the mere substitution of one element for another known in the field. *See KSR*, 127 S.Ct. at 1740 ("when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result"). The Appellant has not provided any evidence to show that the use of the gas spring in place of the conventional metal spring yielded unexpected results or was beyond the skill of one having ordinary skill in the art.

We further found *supra* that those skilled in the art would have been familiar with the conventional construction of a gas spring, comprising a movable wall that partially defines a substantially-sealed, variable volume

experience in technical and strategic intelligence (Cutshaw Decl. 1:¶¶ 4, 5). Neither is a general machinist with several years of hands-on experience in knife design.

chamber containing a gas, wherein the movable wall reduces the volume of the chamber, thereby compressing the gas to create a biasing spring force. As such, it would have been obvious to one having ordinary skill in the art, when implementing the substitution of a gas spring for the metal spring in Collins, to have used the conventional gas spring as was well known in the art. Thus, we have determined that the Examiner has set forth a *prima facie* case of obviousness of claimed subject matter.

Inasmuch as we have concluded that the subject matter of Appellant's claims 1 and 2 are *prima facie* obvious, and because Appellant has furnished evidence in rebuttal of obviousness, we now turn to consider this evidence. When such evidence is presented, it is our duty to consider all evidence anew. *See, e.g., In re Eli Lilly and Co.*, 902 F.2d 943 (Fed. Cir. 1990). We are also mindful that objective evidence of nonobviousness in any given case may be entitled to more or less weight depending on its nature and its relationship with the merits of the invention. *See Stratoflex Inc. v. Aeroquip Corp.*, 713 F.2d 1530 (Fed. Cir. 1983).

Secondary Considerations

We recognize that evidence of secondary considerations, such as that presented by the Appellant, must be considered in route to a determination of obviousness/nonobviousness under 35 U.S.C. § 103. Accordingly, we consider anew the issue of obviousness under 35 U.S.C. § 103, carefully evaluating and weighing both the evidence relied upon by the Examiner and the objective evidence of nonobviousness provided by the Appellant.

The Appellant presents evidence of commercial success and long-felt, but unmet, need. We first examine the Appellant's evidence of commercial success.

The Appellant states that he has sold seven limited production knives and that he recently displayed his knife at a trade show and it garnered "substantial interest" (App. Br. 10-11; McCann Decl. 2-3:¶¶10,12).² As acknowledged by the Appellant himself, this evidence of commercial success is scant (App. Br. 11, noting that "commercial success is not the primary argument in support of the secondary considerations of nonobviousness in this case").

We must first examine whether the Appellant met its burden of establishing a nexus between the claimed invention and the evidence of secondary considerations. *In re Huang*, 100 F.3d at 139-40. We first note that the evidence provided by the Appellant provides no connection between the claimed knife and the Appellant's FoldairTM knife, which is the basis for

² The McCann Declaration refers to "Statements" of Kim Breed and John Larsen purporting to demonstrate the industry's interest in the Appellant's knife and that the locking mechanism of the knife is unique and nonobvious and provides a solution to the long-felt need of breakage of coil and leaf springs (McCann Decl. 3:¶¶13,14). These Statements do not include the language required by 18 U.S.C. § 1001. The reason for requiring evidence in declaration or affidavit form is to obtain the assurances that any statements or representations made are correct, as provided by 35 U.S.C. § 25 and 18 U.S.C. § 1001. As such, we will not consider the information provided in these Statements in our weighing of the evidence of secondary considerations of nonobviousness.

the evidence of commercial success. In particular, the Appellant has not submitted sufficient evidence to show how the commercial embodiment of the knife is constructed and whether it is the same as the claimed knife having a movable wall that partially defines a substantially sealed, variable volume chamber containing a gas and wherein movement of the latch member from the locked position to the unlocked position causes the movable wall to reduce the volume of the chamber, thereby compressing the gas to create spring force against the latch member.

The Appellant submitted an article written by John Larsen reviewing the Appellant's "Air-Lock" pocket knife, presumably to bolster his argument of commercial success by demonstrating approval by the industry and to show a nexus between the alleged commercial success and the use of a gas spring in the knife, as claimed.³ The Larsen article was submitted for the first time in the record as an attachment to the Appellant's Appeal Brief, and no mention of it was made in the Evidence Appendix. In the Appeal Brief, the Appellant states:

Since making this statement, Mr. Larsen authored an article published in the January 2007 edition of *Tactical Knives* magazine lauding the uniqueness of the gas spring of Mr. McCann's knife. Because this article was not previously available, it was not in the record before the Examiner and, therefore, is not in the record before the Board.

³ Larsen, John A., "The Air-Lock Pocket Knife," *Tactical Knives* 38-41 (date unknown).

(App. Br. 14). Our rules for filing an appeal to the Board require that the Appellant file with its Appeal Brief “[a]n appendix containing copies of any evidence submitted pursuant to [37 C.F.R.] §§ 1.130, 1.131, or 1.132 of this title or of any other evidence entered by the examiner and relied upon by the appellant in the appeal, along with a statement setting forth where in the record that evidence was entered in the record by the examiner.” 37 C.F.R. § 41.37(c)(1)(vii) (2007). The rules further state that “[r]eference to unentered evidence is not permitted in the brief,” 37 C.F.R. § 41.37(c)(1)(ix), and “[a] brief shall not include any new or non-admitted evidence, or any new or non-admitted affidavit or other evidence.” 37 C.F.R. § 41.37(c)(2). Our rules do provide for the filing of evidence with the Examiner after the filing of a notice of appeal, but prior to filing an Appeal Brief. *See* 37 C.F.R. § 41.33. The Appellant did not file the Appeal Brief until March 28, 2007, presumably at least three months after the article became available; however, the Appellant did not make the showing to the Examiner required under this rule to justify that the article should be entered in the record. The Appellant thus correctly stated in the Appeal Brief that the article is not in the record before us, and as such, we will not consider the article. The Appellant has directed us to no other evidence that his customers purchased the knife because of its inventive features (i.e., gas spring construction) and the advantages flowing therefrom.

Further, even if we are to consider the evidence of commercial success as sufficiently connected to the claimed knife, the Appellant has provided evidence of only seven sales of his limited production (\$400) knife

and has proffered no evidence of sales of his production (\$200) knife. The Appellant has also failed to provide persuasive evidence as to market share so as to put the evidence of gross sales figures into perspective in the context of the particular market at hand. As such, we find the Appellant's evidence of commercial success to be of no value to our determination of nonobviousness.

We next review the Appellant's evidence of long-felt need and failure of others. Upon review of all of the evidence of long-felt need submitted by the Appellant we have no idea of exactly when the articulated problem, *viz*, failure of metal springs in locking mechanisms used in foldable knives, was first identified. As such, we have no way of knowing just how long the need for a solution to the problem existed. “[L]ong-felt need is analyzed as of the date of an articulated identified problem and evidence of efforts to solve that problem.” *Texas Instruments, Inc. v. ITC*, 988 F.2d 1165, 1178 (Fed. Cir. 1993).

The declarations submitted by the Appellant demonstrate only that the need for a solution to the articulated problem existed as of May 18, 2006, the day on which the earliest declaration was signed. This is not evidence of a “long-felt” need nor does it evince that the need was a persistent one in the art. *Orthopedic Equipment*, 707 F.2d 1376; *see also In re Gershon*, 372 F.2d at 539.

Further, the Appellant has proffered no persuasive evidence that others in the industry had made attempts to solve the articulated problem and failed. The Declarations merely state that the problem of spring failure was

known in the art at the time the declarations were signed. None of the declarants, including those who were journalists and are presumably familiar with the prior art in knife designs, offered supporting evidence that others had attempted to solve this problem. The only evidence offered was to state that to their knowledge no one had solved the problem the same way that the Appellant solved it. Thus, the evidence of long-felt need proffered by the Appellant is not sufficient to show the duration of the problem or the efforts and/or resources expended during that time to solve the problem.

Further, the Poehlmann reference appears to satisfy the long-felt need by teaching that other mechanisms, aside from metal springs that are subject to failure, can be used as a spring force in a folding knife (Fact 9). *Newell Companies*, 864 F.2d at 768 (“[O]nce another supplied the key element, there was no long-felt need or, indeed, a problem to be solved.”)

Obviousness Determination

Having now considered all the evidence presented by Appellant against obviousness and weighing all the evidence anew, it is our conclusion that the evidence for obviousness greatly outweighs the evidence against obviousness. *See In re Fenton*, 451 F.2d 640, 643 (CCPA 1971) (the court balanced the Patent Office’s case against the strength of appellant’s objective evidence of non-obviousness.) Accordingly, it is our legal conclusion that the subject matter of claims 1 and 2 are unpatentable under 35 U.S.C. § 103.

The Appellant attempted in some of the declarations to submit opinion evidence from the declarants as to the ultimate legal conclusion of

obviousness. As we found *supra*, Messrs. Covert and Cutshaw are not persons having ordinary skill in the art under the Appellant's own definition of such, and thus their opinions as to the obviousness or nonobviousness of the subject matter of the Appellant's claimed invention are of no value. Further, contrary to the mischaracterization in paragraph 14 of the McCann Declaration, the Larsen Statement does not purport to state that the locking mechanism of the claimed invention is "nonobvious." Further, Mr. Larsen also does not qualify as one having ordinary skill in the art according to the Appellant's own definition. Finally, the opinion evidence of nonobviousness proffered in the Karwan Declaration is conclusory with insufficient factual basis to support the assertions made. For example, Mr. Karwan does not state that he reviewed the Collins and Poehlmann references, nor does he state his understanding of the legal standard for nonobviousness.

The Appellant also argues that this case is analogous to the facts before the Court in *Eibel Process Company v. Minnesota & Ontario Paper Co.*, 261 U.S. 45 (1923) and before the Court of Customs and Patent Appeals in *In re Conover*, 304 F.2d 680 (CCPA 1962). We disagree. In *Eibel* and *Conover*, it was the discovery of the source of the problems in the prior art, not before known, that made the claimed remedies non-obvious. See *Eibel*, 261 U.S. at 67-68 and *Conover*, 304 F.2d at 681-82. In this case, the Appellant has provided evidence from multiple declarants attesting to the fact that the source of the problem in the art of foldable knives, *viz*, the failure of the metal biasing springs due to fatigue and breakage, was well

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known in the art at the time of the invention.⁴ As such, the Appellant's invention, unlike in these prior cases, does not rest, in part, upon the discovery of the source of the problem with the prior art.

Based on our review and consideration of all of the evidence before us, we conclude that the subject matter of claim 1 would have been obvious to one having ordinary skill in the art at the time the invention was made, and thus we sustain the Examiner's rejection of claims 1 and 2 under 35 U.S.C. § 103(a) as unpatentable over Collins and Poehlmann.

CONCLUSIONS OF LAW

We conclude the Appellant has failed to show that the Examiner erred in rejecting claims 1 and 2 under 35 U.S.C. § 103(a) as unpatentable over Collins and Poehlmann.

DECISION

The decision of the Examiner to reject claims 1 and 2 is affirmed. No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED

vsh

⁴ *See* Karwan Decl. ¶ 5, Covert Decl. ¶ 7, and Cutshaw Decl. ¶ 7.

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